

Amendments to the Specification:

Please replace the paragraph beginning on page 3, line 7, with the following amended paragraph:

Referring to the accompanying figure, the ~~PC~~PC 2 is connected via a USB PC ~~port~~port 4 and corresponding ~~cable~~cable 6 to the GPS receiver device 10 which consists of a GPS RF front-end section Rx and a GPS antenna. Whilst the device could have been a "dongle" type device thereby omitting the cable, the cable facilitates positioning of the GPS receiver device (including the antenna) in a prominent position, thereby increasing the chances of acquiring GPS signals. For example, one might place the GPS receiver device near a window if operating in doors.

Please replace the paragraph beginning on page 3, line 15, with the following amended paragraph:

When operative, the GPS receiver device receives NAVSTAR SPS GPS signals (which are direct sequence spread spectrum signals) through its antenna and pre-process them, typically by passive bandpass filtering in order to minimise out-of-band RF interference, preamplification, down conversion to an intermediate frequency (IF) and analogue to digital conversion. The resultant 1-bit GPS signal samples contain the IF signal which remains modulated, still containing all the information from the available satellites. The GPS signal ~~samples~~samples 12 are then outputted from the GPS receiver device via the USB link into PC ~~memory (not shown)~~memory 14.

Please replace the paragraph beginning on page 3, line 24, with the following amended paragraph:

Using appropriate GPS signal processing ~~software~~software 16 according to the present invention, the GPS signal samples are processed as further described below so that GPS signals ~~may~~ be acquired for the purpose of deriving pseudorange information from

which the position of the PC can be determined using conventional navigation algorithms.

Please replace the paragraph beginning on page 4, line 14, with the following amended paragraph:

In accordance with the present invention, for a 1-bit stream of GPS IF signal samples, consecutive 32 bit groups are combined to form consecutive words of the GPS IF signal sample stream which then have an XOR operation applied to them with a corresponding 32 bit words of both I and Q phase GPS replica signals. The XOR operation ~~operation 18~~ is performed in ~~hardware~~ hardware 20 pursuant to a software based instruction, e.g. on an ARM9 ~~microprocessor~~ microprocessor 22 which naturally operates on 32 bit words. For both I and Q phases, the word based, XOR operation outputs are ~~summed~~ summed 24 and the sums combined to produce a correlation output which is used to determine whether the signal has been acquired or not.

Please replace the paragraph beginning on page 4, line 24, with the following amended paragraph:

If we compare the word based processing of the present invention with conventional bit based processing, there is an effective reduction in the number of XOR operations by a factor of 32 for the cost of having to carry out two bit counts and some simple packing operations. This in itself is worthwhile but in addition, in most practical software solutions, the IF data will be stored in packed words. Therefore, not only does the generation of the packed word have no cost, but ~~the an the~~ the unpacking cost needed if the conventional bit based processing from word based IF method is avoided.

Please replace the abstract with the abstract on the following page: